WHAT IS CLAIMED IS:

1.   A VSB transmitter for use with an MPEG data signal and a supplemental data signal, the VSB transmitter comprising:

a VSB supplemental data processor comprising:

a forward error correction coder that codes the supplemental data signal;

a null sequence inserter for inserting a null sequence to the supplemental data signal subjected to the forward error correction coder for generating a predefined sequence;

a header inserter for inserting a header to the supplemental data signal having the null sequence inserted therein; and

a multiplexer for multiplexing the MPEG data signal and the supplemental data signal having the header inserted thereto in at least one of a predetermined multiplexing ratio and unit; and

a VSB transmission system connected to the VSB supplemental data processor for modulating an output from the multiplexer to form at least one data field comprising a plurality of segments that includes at least one segment formed from the supplemental data signal and at least one segment formed from the MPEG data signal.

2.   The VSB transmitter of claim 1, wherein the forward error correction coder is a Reed-Solomon coder.

3.   The VSB transmitter of claim 2, wherein the supplemental data signal includes at least one data packet having X bytes and the Reed-Solomon coder provides parity bytes of Y bytes, wherein a total of X and Y bytes is 184 bytes.

4.   The VSB transmitter of claim 3, wherein the header inserter adds three bytes of header information to the data packet, wherein the header information contains program identification.

5.   The VSB transmitter of claim 3, wherein the null sequence inserter divides the one data packet of the supplemental data signal into a plurality of data packets.

6.   The VSB transmitter of claim 5, wherein the predefined sequence has substantially the same occurrence of bits "1" and "0".

7.   The VSB transmitter of claim 1, further comprising an interleaver receiving data from the forward error correction coder and outputting to the null sequence inserter, the interleaver interleaves the supplemental data signal coded by forward error correction code.

8.   The VSB transmitter of claim 7, wherein the forward error correction coder is a Reed-Solomon coder.

9.   The VSB transmitter of claim 8, wherein the supplemental data signal includes at least one data packet having X bytes and the Reed-Solomon coder provides parity bytes of Y bytes, wherein a total of X and Y bytes is 184 bytes.

10.   The VSB transmitter of claim 9, wherein the header inserter adds three bytes of header information to the data packet, wherein the header information contains program identification.

11.   The VSB transmitter of claim 9, wherein the null sequence inserter divides the one data packet of the supplemental data signal into a plurality of data packets.

12.   The VSB transmitter of claim 11, wherein the predefined sequence has substantially the same occurrence of bits "1" and "0".

13. The VSB transmitter of claim 1, wherein the multiplexing unit is a segment, and the multiplexing ratio varies with amounts of MPEG data packets representing the MPEG data signal and supplemental data packets representing the supplemental data signal.

14. The VSB transmitter of claim 13, wherein the multiplexing ratio of the supplemental data packets and the MPEG data packets in the multiplexer is one segment to one segment.

15. The VSB transmitter of claim 13, wherein the multiplexing ratio of the supplemental data packets and the MPEG data packets in the multiplexer is one segment to three segments.

16. The VSB transmitter of claim 1, wherein the multiplexer is responsive to a field synchronizing signal used for synchronizing a data frame of the VSB transmission system.

17. The VSB transmitter of claim 1, wherein the data field has 312 data segments and one field synchronizing segment.

18. A VSB supplemental data processor for use with a VSB transmission system to provide a supplemental data signal and an MPEG data signal thereto, wherein the VSB transmission system modulates at least one data field comprising a plurality of segments that includes at least one segment formed from the supplemental data signal and at least one segment formed from the MPEG data signal, the VSB supplemental data processor comprising:

a forward error correction coder that codes the supplemental data signal;

a null sequence inserter for inserting a null sequence to the supplemental data signal subjected to the forward error correction coder for generating a predefined sequence;

a header inserter for inserting a header to the supplemental data signal having the null sequence inserted therein; and

a multiplexer for multiplexing the MPEG data signal and the supplemental data signal having the header inserted thereto in at least one of a predetermined multiplexing ratio and unit.

19.   The VSB supplemental data processor of claim 18, wherein the forward error correction coder is a Reed-Solomon coder.

20.   The VSB supplemental data processor of claim 19, wherein the supplemental data signal includes at least one data packet having X bytes and the Reed-Solomon coder provides parity bytes of Y bytes, wherein a total of X and Y bytes is 184 bytes.

21.   The VSB supplemental data processor of claim 20, wherein the header inserter adds three bytes of header information to the data packet, wherein the header information contains program identification.

22.   The VSB supplemental data processor of claim 20, wherein the null sequence inserter divides the one data packet of the supplemental data signal into a plurality of data packets.

23.   The VSB supplemental data processor of claim 22, wherein the predefined sequence has substantially the same occurrence of bits "1" and "0".

24.   The VSB supplemental data processor of claim 18, further comprising an interleaver receiving data from the forward error correction coder and outputting to the null sequence inserter, the interleaver interleaves the supplemental data signal with forward error corrected code.

25.   The VSB supplemental data processor of claim 24, wherein the forward error correction coder is a Reed-Solomon coder.

26. The VSB supplemental data processor of claim 25, wherein the supplemental data signal includes at least one data packet having X bytes and the Reed-Solomon coder provides parity bytes of Y bytes, wherein a total of X and Y bytes is 184 bytes.

27. The VSB supplemental data processor of claim 26, wherein the header inserter adds three bytes of header information to the data packet, wherein the header information contains program identification.

28. The VSB supplemental data processor of claim 26, wherein the null sequence inserter divides the one data packet of the supplemental data signal into a plurality of data packets.

29. The VSB supplemental data processor of claim 28, wherein the predefined sequence has substantially the same occurrence of bits "1" and "0".

30. The VSB supplemental data processor of claim 18, wherein the multiplexing unit is a segment, and the multiplexing ratio varies with amounts of MPEG data packets representing the MPEG data signal and supplemental data packets representing the supplemental data signal.

31. The VSB supplemental data processor of claim 30, wherein the multiplexing ratio of the supplemental data packets and the MPEG data packets in the multiplexer is one segment to one segment.

32. The VSB supplemental data processor of claim 30, wherein the multiplexing ratio of the supplemental data packets and the MPEG data packets in the multiplexer is one segment to three segments.

33.   A method for a supplemental data packet and an MPEG data packet in a VSB transmitter comprising a VSB supplemental data processor and a VSB transmission system, the method comprising the steps of:

subjecting the supplemental data packet of preset bytes to a Reed-Solomon coding and adding a Reed-Solomon parity data of preset bytes to the supplemental data packet;

interleaving the coded supplemental data packet;

inserting null sequence data into the interleaved supplemental data packet for producing at least one supplemental data packet of a preset number of bytes;

adding an MPEG header of preset bytes to each one of the supplemental data packets;

multiplexing the MPEG data packet with the supplemental data packet at a preset multiplexing ratio; and

modulating the data multiplexed at the preset multiplexing ratio through the VSB transmission system.

34.   The method claim 33, wherein the Reed-Solomon parity is included to only one of the supplemental data packets.

35.   The method of claim 33, wherein the inserting null sequence data includes the steps of;

dividing the supplemental data packet into two supplemental data packets having the same numbers of bytes; and

inserting a null sequence having the same bytes with the supplemental data packet into each one of the supplemental data packets to provide two supplemental data packets each having the null sequence inserted therein.

36.   The method of claim 35, wherein each one of the supplemental data packets has 184 bytes comprising 92 bytes of supplemental data 92 bytes of the null sequence.

37.   The method of claim 33, wherein the MPEG header is an identification code for identifying whether the multiplexed data is the supplemental data packet or the MPEG data packet.

38.   A VSB signal format comprising:

an MPEG header region; and

a supplemental data region having original supplemental data and null sequence data.

39.   The VSB signal format of claim 38, wherein the MPEG header region has 3 bytes, the original supplemental data has 92 bytes, and the null sequence data has 92 bytes.

40.   The VSB signal format of claim 38, wherein the supplemental data region further includes a Reed-Solomon parity of preset bytes.